

Ship 14 DEC.

Work Order ID 154131

154131

Page 1

Monday, December 05, 2016 3:54:28 PM

Item ID: D3171-3

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Angle

Start Date: 12/6/2016 Start Qty: 4.00

4 10
4

Cust Item ID:

Required Date: 12/9/2016 Req'd Qty: 4.00

Customer:

Reference:

Approvals:

Process Plan: 

Date: 16-12-05

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3171

B

DAS
46
9-89

16/12/06

100

0.00

100

FLOW WATER JET

Waterjet

Memo

0.05

FLOW CNC Waterjet

1-Cut as per Dwg D3171

Dwg Rev: B

Prog Rev: B

2-Deburr if necessary

10

110

0.00

110

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.01

Quality Control

DAS
46
9-89

16/12/06

10

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____		Work Order update only ☐																																																																					
Work Order: _____ Part No. _____ NCR No. _____		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">DISPOSITION</th> <th colspan="4" style="text-align: center;">AGAINST DEPARTMENT/PROCESS</th> </tr> <tr> <td style="text-align: center;">Rework</td><td>☐</td> <td style="text-align: center;">Skid-tube</td><td>☐</td> <td style="text-align: center;">Cross tube</td><td>☐</td> <td style="text-align: center;">Water Jet</td><td>☐</td> <td style="text-align: center;">Engineering</td><td>☐</td> </tr> <tr> <td style="text-align: center;">Scrap</td><td>☐</td> <td style="text-align: center;">Machining</td><td>☐</td> <td style="text-align: center;">Small Fab</td><td>☐</td> <td style="text-align: center;">Prod. Eng. Coord.</td><td>☐</td> <td style="text-align: center;">Quality</td><td>☐</td> </tr> <tr> <td style="text-align: center;">Use-as-is</td><td>☐</td> <td style="text-align: center;">Thermoforming</td><td>☐</td> <td style="text-align: center;">Finishing</td><td>☐</td> <td style="text-align: center;">Rec/Store/Packaging</td><td>☐</td> <td style="text-align: center;">Other</td><td>☐</td> </tr> <tr> <td style="text-align: center;">Suspected Unapproved</td><td>☐</td> <td style="text-align: center;">Large Fab</td><td>☐</td> <td style="text-align: center;">Composite</td><td>☐</td> <td style="text-align: center;">Supplier</td><td>☐</td> <td></td><td></td> </tr> </table>		DISPOSITION		AGAINST DEPARTMENT/PROCESS				Rework	☐	Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐	Scrap	☐	Machining	☐	Small Fab	☐	Prod. Eng. Coord.	☐	Quality	☐	Use-as-is	☐	Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐	Suspected Unapproved	☐	Large Fab	☐	Composite	☐	Supplier	☐																								
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Work Order ID 154131

Monday, December 05, 2016 3:54:28 PM

154131

Page 2

Item ID: D3171-3

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Angle

Start Date: 12/6/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 12/9/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.01

Quality Control

⑩

16-12-06

130

Small Fab

0.00

130

Brake NC

Memo

0.00

Brake NC

Bend as per Dwg D3171

DAS
30
9-89

⑩

DEC 08 2016

150

QC5- Inspect part completeness to step on W/O

0.00

150

QC

Memo

0.01

Quality Control

⑩

DAS
38
9-89

DEC 09 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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154131

Page 3

Item ID: D3171-3

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N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Angle

Start Date: 12/6/2016 Start Qty: 4.00 ***4***

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Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Location: <u>STOP</u>	0.00							
160									
Packaging	Memo	0.01							
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.07							
Quality Control									

DEC 12 2016

D/
DAS
9-6
9-89DAS
21
9-89

DEC 12 2016

DEC 12 2016

DAS
21
9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Description Work Order Deviation		Disposition			Completed By
					Lead hand / Supervisor Approval Verification
					QC / QA Coordinator Approval
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OTHER : _____					

Picklist Print

Monday, December 05, 2016 3:54:32 PM

Work Order ID: 154131

154131

Parent Item: D3171-3

D3171-3

Parent Item Name: Angle

Start Date: 12/6/2016

Required Date: 12/9/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 16-11-10 AS PER DWG REV.B DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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M304S24GA

Purchased

No

sf

90.3490

0.088842

DAS
46
9-89

16/12/16

M304S24GA

304/316 .025 Sheet

Location

Loc Qty

Loc Code

MAT020

89.2

m135275

59.9

m135780

29.3

MAT20

1.149

m134677

1.149

0.2

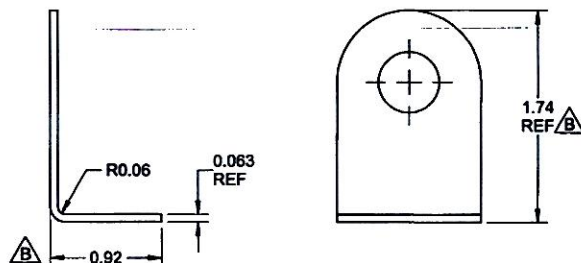
DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

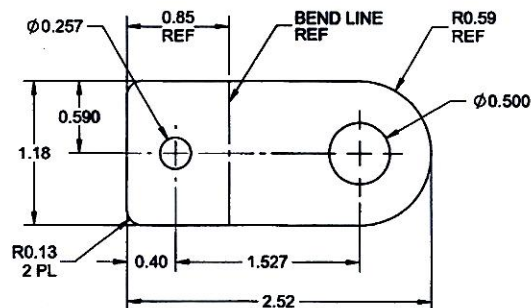
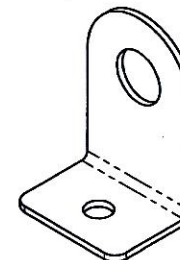
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			Completed By
					Lead hand / Supervisor Approval Verification
					QC / QA Coordinator Approval
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					



D3171-1 ANGLE
(MAKE FROM D3171-1F)



D3171-1F
FLAT PATTERN

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 154131
16-12-05

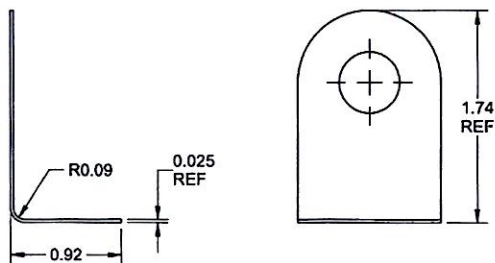
D3171-1-1F NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, ANNEALED, 0.063 THICK
PER MIL-S-6059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF. DART SPEC. M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.05 lbs

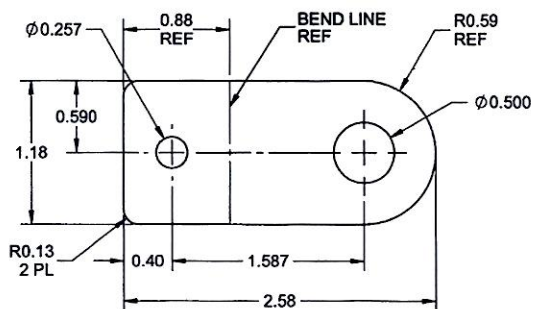
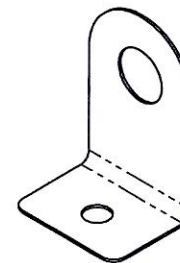
B	UPDATE TO CURRENT STANDARD: D3171-1: 0.92 AND 1.74 REF WERE 0.90 REF AND 1.72 (MFG REQUEST/CAD ERROR); ADD D3171-3. REASON: PAR14-380.	MB	16.07.14
A	NEW ISSUE	DS	02.10.08
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	MB		
CHECKED	ML	DRAWING NO.	REV. B
MFG. APPR.	DD	D3171	SHEET 1 OF 2
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	ANGLE	NTS
DATE	16.07.14	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. IT IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASED
2016-11-09
821 16-668

APPROVED



D3171-3 ANGLE
(MAKE FROM D3171-3F)



D3171-3F
FLAT PATTERN

D3171-3/3F NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, ANNEALED, 0.025 THICK
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF. DART SPEC. M304S24GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.02 lbs

RELEASED
2016-11-09

APPROVED

DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	MB		
CHECKED	ML	DRAWING NO.	REV. B
MFG. APPR.	DD	D3171	SHEET 2 OF 2
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	ANGLE	NTS
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